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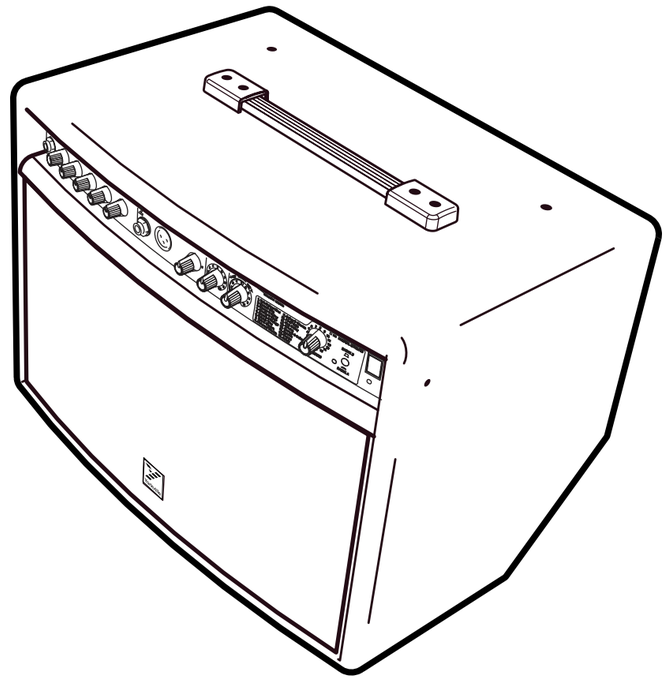
AM100

ACOUSTIC MASTER



TYPE: YS1004

SERVICE MANUAL

Manual-Service-am100-1v3.pdf

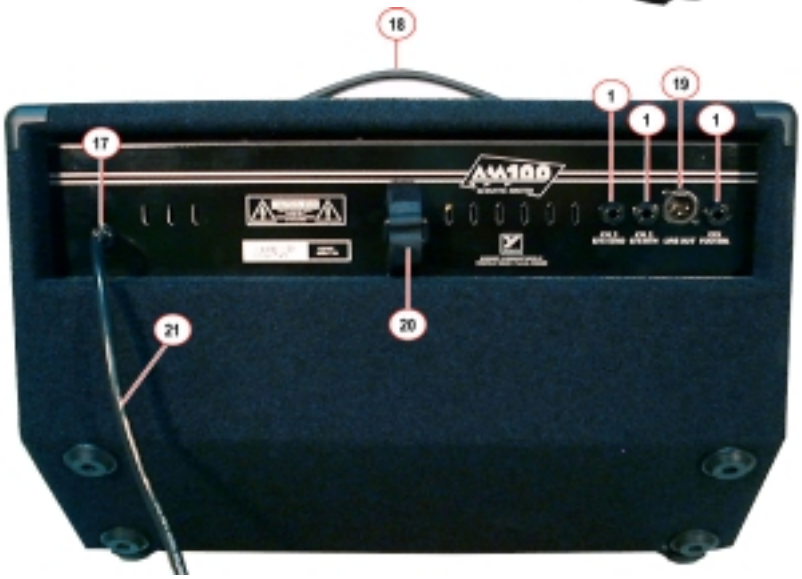
am100 Oct. 20, 2000

YS No.	Description	Qty.
3507	28 PIN X .6" I.C DEEP SOCKET	1
3550	44PIN PLCC SOCKET	1
3557	84PIN PLCC SOCKET	1
3571	28 PIN X .6" I.C. SOCKET	1
6994	CRYSTAL CODEC 44PIN PLCC	1
6940	16MHZ CRYSTAL VERT 2-PIN .25"CASE	1
6405	RED 3MM LED 1V7 5MA BRT	2
6407	YEL 3MM LED 1V8 5MA	1
6408	GRN 3MM LED 1V9 5MA FROSTED	1
6825	1N4148 75V 0A45 DIODE T&R	9
6438	1N4004 400V 1A0 DIODE T&R	4
6827	1N5402 200V 3A0 DIODE	4
6822	1N4745A 16V0 1W0 ZENER 5% T&R	2
6463	1N5251BRL 22V0 0W5 ZENER 5% T&R	1
6738	MC7805CT TO220 P 5V0 REG V1	1
5103	MPSA06 TO92 NPN TRAN T&R TA	1
5105	MPSA13 TO92 NPN DARL T&R TA	3
5122	J109 TO92 NCH JFET T&R TC	1
6755	LM3876T IC 40 WATT POWER AMP	2
6840	MC33078P IC DUAL OP AMP	1
6882	TL072CP IC FET DUAL OP AMP	1
6889	TLO74CN IC QUAD O/A T.I ONLY	4
6943	74HC374N IC OCTAL DTYPE LATCH	1
6986	27C512 PROM IC YORKVILLE 16X2 PRG	1
6992	1365-102 IC DIGITAL REVERB ASIC	1
6993	1250-101 IC SRAM 32KX8	1
5402	_15P 100V 10%CAP T&R BEAD NPO	2
5405	_27P 200V 5%CAP T&R RAD CER.2"NPO	3
5199	100P 100V 2%CAP T&R RAD CER.2"NPO	1
5410	100P 100V 10%CAP T&R BEAD NPO	1
5420	680P 50V 10%CAP T&R BEAD NPO	4
5422	__1N 50V 10%CAP T&R BEAD NPO	3
5208	__2N2 400V 5%CAP T&R RAD .2"FLM	2
5274	__2N2 200V 5%CAP T&R RAD CER.2"NPO	6
5426	__2N2 50V 10%CAP T&R BEAD Y5R	2
6451	__4N7 250V 20%CAP BLK 'Y' 10MM AC	1
5204	_10N 100V 10%CAP T&R RAD .2"FLM	5
5300	_10N 50V 10%CAP T&R BEAD X7R	5
5207	_18N 100V 5%CAP T&R RAD .2"FLM	2
6435	_22N 275V 20%CAP BLK 'X2' 15MM AC	1
5310	_68N 50V 10%CAP T&R BEAD X7R	2
5228	100N 100V 5%CAP T&R RAD .2"FLM	3
5314	100N 50V 10%CAP T&R BEAD X7R	13
5231	220N 63V 10%CAP T&R RAD .2"FLM	3
5234	470N 63V 10%CAP T&R RAD .2"FLM	1
5255	__1U 63V 20%CAP T&R RAD .2"EL	2
5256	__1U 63V 5%CAP T&R RAD .2"FLM	6
5259	__4U7 63V 20%CAP T&R RAD .2"EL	3
5281	_10U 16V 20%CAP T&R RAD .2"NP	4
5945	_10U 63V 20%CAP T&R RAD .2"EL	3
5260	_22U 50V 20%CAP T&R RAD .2"EL	1
5961	_33U 16V 20%CAP T&R RAD .2"NP	7
5267	100U 25V 20%CAP T&R RAD .2"EL	1
5879	100U 16V 20%CAP T&R 8X7MM .2"EL	2
5630	330U 25V 20%CAP BLK 10X13MM EL	2
5887	2200U 50V 20%CAP BLK 18X27MM EL	2
4527	ROT GRY 20MM 4BIT ENCODER P31	1
4417	_10K 5B LIN 9MM HORIZONTAL P28	2
4418	_10K 5C R/A 9MM HORIZONTAL P28	1
4420	_50K B LIN 9MM HORIZONTAL P28	3
4419	100K B LIN 12MM HORIZONTAL STP27	2
711	30 X 50 X 1.5MIL PLASTIC BAG	1
8547	PLASTIC FOOT BLACK	8
8570	CORNER, 2 LEGS NOTCED LIP BLACK	6
3467	CLIP 205X032 14-16AWG DISC//INSUL	2
3489	CLIP 250X032 18-22AWG DISCO/INSL	5
3491	CLIP 205/187X020 18-22AWG DISCO/INS	7
3682	250 MALE PCB TAB BULK CARTRIGE	13
3498	1/4" JCK PCB MT HORZ	4
3528	1/4" JCK PCB MT HORZ GOLD TR_	1
3417	6-32 SCREW TERMINAL PC MOUNT	3
3660	XLR FEML PCB MT HORZ	1
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1
3451	EYELET SMALL 0.089 OD PLATED	7
3414	INTERNATIONAL PC MOUNT FUSEHOLDER	2
2439	1.25 AMP SLO-BLO .25X1.25 FUSE	1
8459	9.5" STRAP HANDLE, PLASTIC COVERS	1
8604	10-32 T NUT	2
7418	8R 30W TWEETER PIEZO KSN1056A	1
3745	DUAL XSISTOR PBL SPRING PLATE ZN	2
3804	SNAP ON 1.5" INSULATING BUSHING	1
3795	#8 GROUND LUG ZIERICK 505-169	1
3803	NYLON SECUR-A-TACH MINI PLASTIC TIE	1
3810	4" NYLON CABLE TIE	4
8636	BUTTON KNOB FLAT BLACK	3
8641	AQUA KNOB FOR "NEW" ACOUSTIC SERIE	9
3481	8' 3/18 SJT AC LINE CORD 250 CLIPS	1

YS No.	Description	Qty.
3834	HEYCO #1214 STRAIN RELIEF	1
	"Y" LOGO ACOUSTIC SERIES SML. DOMED	1
3674	9 CIR CABLE HOLDER .098	2
8800	6-32 KEPS NUT ZINC	8
8787	8-32 KEPS NUT ZINC	4
8845	10-32 PEMNUT SS-032-2-Z1	2
8898	1/4-20 CAGE NUT C7998142027	2
3830	TO218 PREGREASED MICA 56-78-2AP	3
3850	TO-220 PLASTIC TRANSISTOR INSULATOR	1
8581	CUSTOM PBL TRANSISTOR SPACER	3
3818	EMI SUPPRESSION FERRITE BEAD T&R	2
4597	22AWG STRAN TC WIR JMP	18
4599	22AWG SOLID SC WIR T&R JMP	71
4594	1/8W 10R0 2%FLAME PROOF T&R RES	1
4675	1/2W 10R 5% T&R RES	4
4816	1/4W 33R 5% T&R RES	1
4704	5.0W 33R 5% BLK RES	1
4735	1.0W 100R 5% T&R RES	6
4897	1/4W 120R 5% T&R RES	1
4909	1/4W 200R 5% T&R RES	1
4977	1/4W 220R 5%MINI T&R RES	2
4770	1/4W 249R 1% T&R RES	3
4655	1/2W 330R 5% T&R RES	8
4855	1/4W 330R 5% T&R RES	1
5010	1/4W 330RX9 5% 10PIN SIP RES	1
4821	1/4W 470R 5% T&R RES	2
4799	1/4W 562R 1% T&R RES	2
4923	1/4W 680R 5% .2"U T&R RES	1
4981	1/4W 1K 5%MINI T&R RES	13
6110	1/4W 1K0 1%MINI MF T&R RES	2
4585	1/4W 1K2 5%MINI T&R RES	1
4988	1/4W 1K5 5%MINI T&R RES	4
4808	1/4W 2K 5% T&R RES	4
4847	1/4W 2K2 5% T&R RES	1
6114	1/4W 2K49 1%MINI MF T&R RES	10
4826	1/4W 3K3 5% T&R RES	4
4827	1/4W 4K7 5% T&R RES	2
4639	1/4W 4K99 1% T&R RES	2
4893	1/4W 5K1 5% T&R RES	2
4978	1/4W 6K8 5%MINI T&R RES	1
5011	1/4W _10KX9 2% 10PIN SIP RES	1
6116	1/4W 10K0 1%MINI MF T&R RES	37
4830	1/4W 15K 5% T&R RES	3
6123	1/4W 20K0 1%MINI MF T&R RES	4
4777	1/4W 21K5 1% T&R RES	1
4917	1/4W 31K6 1% T&R RES	1
4840	1/4W 33K 5% T&R RES	1
4834	1/4W 47K 5% T&R RES	2
4942	1/4W 100K 5% .2"U T&R RES	1
6120	1/4W 100K 5%MINI T&R RES	7
4796	1/4W 180K 5%MINI T&R RES	2
6127	1/4W 470K 5%MINI T&R RES	2
4844	1/4W 1M 5% T&R RES	1
3608	10" 9C-24AWG RIBBON HITMP 0.1"	1
8842	#4 X 5/16 PAN QUAD TYPE A JS500 BLK	4
8801	6-32 X 3/8 PAN PH TAPTITE JS500	5
8829	6-32 X 3/8 FLAT PH TAPTITE BO#4 HEA	5
8806	6-32 X 1/2 PAN PH TAPTITE JS500	1
8828	6-32 X 3/4 PAN PH TAPTITE JS500	5
8878	#6 X 2" PAN PHIL TYPE A JS500 BLACK	4
8803	8-32 X 3/8 PAN QUAD TAPTITE JS500	2
8763	8-32 X 1/2 PAN PH MS JS500 BLACK	4
8874	8-32 X 1" PAN PHIL TAPTITE JS500	2
8749	10-32 X 1/2 QDX PH TAPTITE JS500	1
8753	#10 X 1/2 PAN PH TYPE A JS500 BLACK	12
8756	#10 X 3/4 PAN PH TYPE A BLACK OXIDE	12
8781	#10 X 7/8 FLAT PHIL TYPE A JS500BLK	10
8912	10-32 X 1 FLAT PHIL MS JS500 BLK	4
8770	1/4-20 X 1 5/16 TRUSS PH MS JS500	2
8905	YORKVILLE PRODUCT SCHEMATIC	1
3833	8 X 3/8 (250 OD,.171 ID)NY SPACER	5
	6.5 INCH WOOFER	2
8820	#8 FLAT WASHER JS500	6
8473	#10 BLACK CUPWASHER SWF-10BK	3
3425	DPDT PUSH SW PCMT MAKE B4 BREAK	3
3698	SPST ROKR SW QUIK 180" AC PWR BL/BL	1
8468	VELCRO STRAP 3/4"X22CM (VELSTRAP)	1
1310	4200 BLOC-80B/100G S120B/100K XFMR	1

AM100
Acoustic Amplifier

applicable to serial numbers 001xxxx



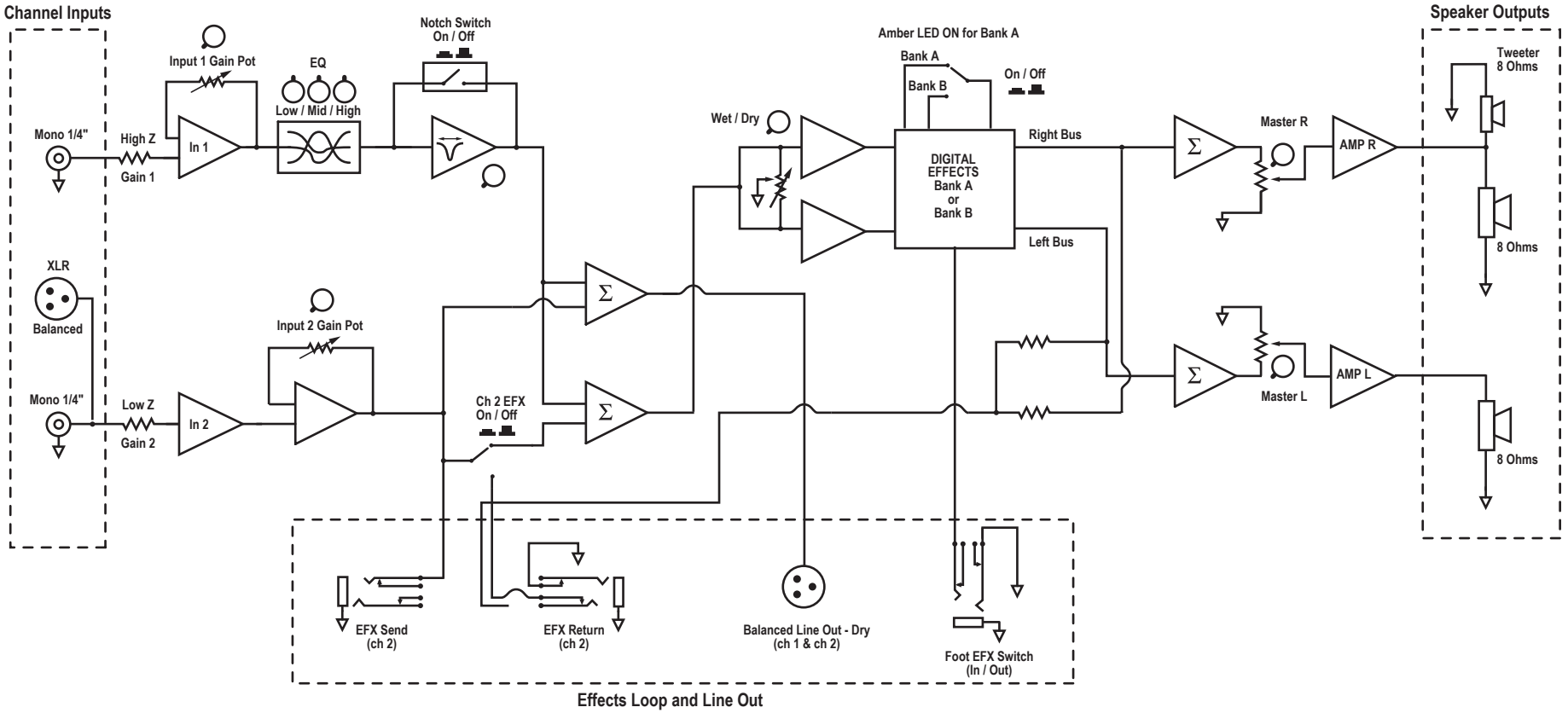
Notes:

#	Part#	Description	Function
Labeled Components			
1	3450	1/4" JCK PCB MT HORZ GOLD TR_	Jack
2	4417	_10K 5B LIN 9MM HORIZONTAL P28	Gain 1
3	4420	_50K B LIN 9MM HORIZONTAL P28	Bass
4	4420	_50K B LIN 9MM HORIZONTAL P28	Mid
5	4420	_50K B LIN 9MM HORIZONTAL P28	Treble
6	4419	100K B LIN 12MM HORIZONTAL STP27	Notch
7	3660	XLR FEML PCB MT HORZ	Jack
8	4418	_10K 5C R/A 9MM HORIZONTAL P28	Gain 2
9	4419	100K B LIN 12MM HORIZONTAL STP27	Volume
10	4417	_10K 5B LIN 9MM HORIZONTAL P28	Effects
11	4527	ROT GRY 20MM 4BIT ENCODER P31	Presets
knob	8641	***Note: All pots use 8641 Aqua Knob***	Knob
12	3698	SPST ROKR SW QUIK 180" AC PWR BL/BL	
13	3425	DPDT PUSH SW PCMT MAKE B4 BREAK	
13	8636	BUTTON KNOB FLAT BLACK	
14	Z338	AM100 Grill (special order while unit is in production only)	
15	8547	PLASTIC FOOT BLACK	
16	8570	CORNER, 2 LEGS NOTCED LIP BLACK	
17	3834	HEYCO #1214 STRAIN RELIEF	
18	8459	9.5" STRAP HANDLE, PLASTIC COVERS	
19	3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	
20	8468	VELCRO STRAP 3/4"X22CM (VELSTRAP)	
21	3481	8' 3/18 SJT AC LINE CORD 250 CLIPS	
22	YSM-1WFR	6.5 INCH WOOFER	
23	7418	8R 30W TWEETER PIEZO KSN1056A	

Internal Electronic Components		
	1310	4200 BLOC-80B/100G S120B/100K XFMR
	2439	1.25 AMP SLO-BLO .25X1.25 FUSE
	3608	10" 9C-24AWG RIBBON HITMP 0.1"
	3745	DUAL XSISTOR PBL SPRING PLATE ZN
	3830	TO218 PREGREASED MICA 56-78-2AP
	3850	TO-220 PLASTIC TRANSISTOR INSULATOR
	4594	1/8W 10R0 2%FLAME PROOF T&R RES
	5010	1/4W 330RX9 5% 10PIN SIP RES
	5011	1/4W _10KX9 2% 10PIN SIP RES
	5103	MPSA06 TO92 NPN TRAN T&R TA
	5105	MPSA13 TO92 NPN DARL T&R TA
	5122	J109 TO92 NCH JFET T&R TC
	5887	2200U 50V 20%CAP BLK 18X27MM EL
	6463	1N5251BRL 22V0 0W5 ZENER 5% T&R
	6738	MC7805CT TO220 P 5V0 REG V1
	6755	LM3876T IC 40 WATT POWER AMP
	6822	1N4745A 16V0 1W0 ZENER 5% T&R
	6827	1N5402__200V 3A0 DIODE
	6840	MC33078P IC DUAL OP AMP
	6882	TL072CP IC FET DUAL OP AMP
	6889	TLO74CN IC QUAD O/A T.I ONLY
	6986	27C512 PROM IC YORKVILLE 16X2 PRG
	6992	1365-102 IC DIGITAL REVERB ASIC
	6993	1250-101 IC SRAM 32KX8
	8581	CUSTOM PBL TRANSISTOR SPACER

Block Diagram for AM100

DESIGNED AND MANUFACTURED BY YORKVILLE SOUND



BLOCK-DIAGRAM-am100-2v0 .ai

U:\M574V15.PRN

CHANNEL 1 INPUT

CHANNEL 2 INPUT

100MVRMS

3mVrms

100mvrms

VOLUME1 10K

VOLUME2 10K

CLIP LED2

CLIP LED1

CH1_NOTCH

BASS

MID

TREBLE

NOTCH

WET/DRY

CH2 EFFECTS BYPASS

MASTER 100K

NUTRIX LINE-OUT JB8

1Vrms

JB6 NO_GOLD EFX/SEND CH2

JB5 GOLD_TIP&RING EFX/RTN CH2

NO_GOLD EFX-ON/OFF BIT5

LEFT_SPR+ BLU TAB9

LEFT_SPR- TAB10 BLK

RIGHT_SPR+ RED TAB13

RIGHT_SPR- TAB8 BLK

TWEETER TAB12 YEL #7418 3.75" 8R

JB2 MONO NO_GOLD

JP4 MIC_IN NUTRIX

JP3 MONO NO_GOLD

FROM AG

TURN-ON

+38VDC

-38VDC

+16V

-16V

+5VDC

DIGND

ART_GNDI

ARTGNDO

ART_INL

ART_INR

ART_OUTL

ART_OUTR

DIGITAL EFFECTS

DRY(PIN27)

WET(PIN25)

LEFT(PIN16)

RIGHT(PIN15)

DGND

SINCE R227 AND R69 ARE PARALLEL ON THE PCB, R69 IS NOT STUFFED; R227 IS 200R

EXPORT

DUMMY

PIN OUTS

LM3876T

PIN 1

MPSA43 MPSA56 E B C

BC550C BC560C C B E

J109 D S G

STYLE "P27"

STYLE "P28"

STYLE_P31 ENCODER

NOTES:

ALL UNMARKED DIODES ARE 1N4148

AC VOLTAGES MEASURED AT 1KHz AND WITH VOLUMES AT 10, TONES AT 0

M574.SCH_DATABASE_HISTORY

MODEL(S):- AM100

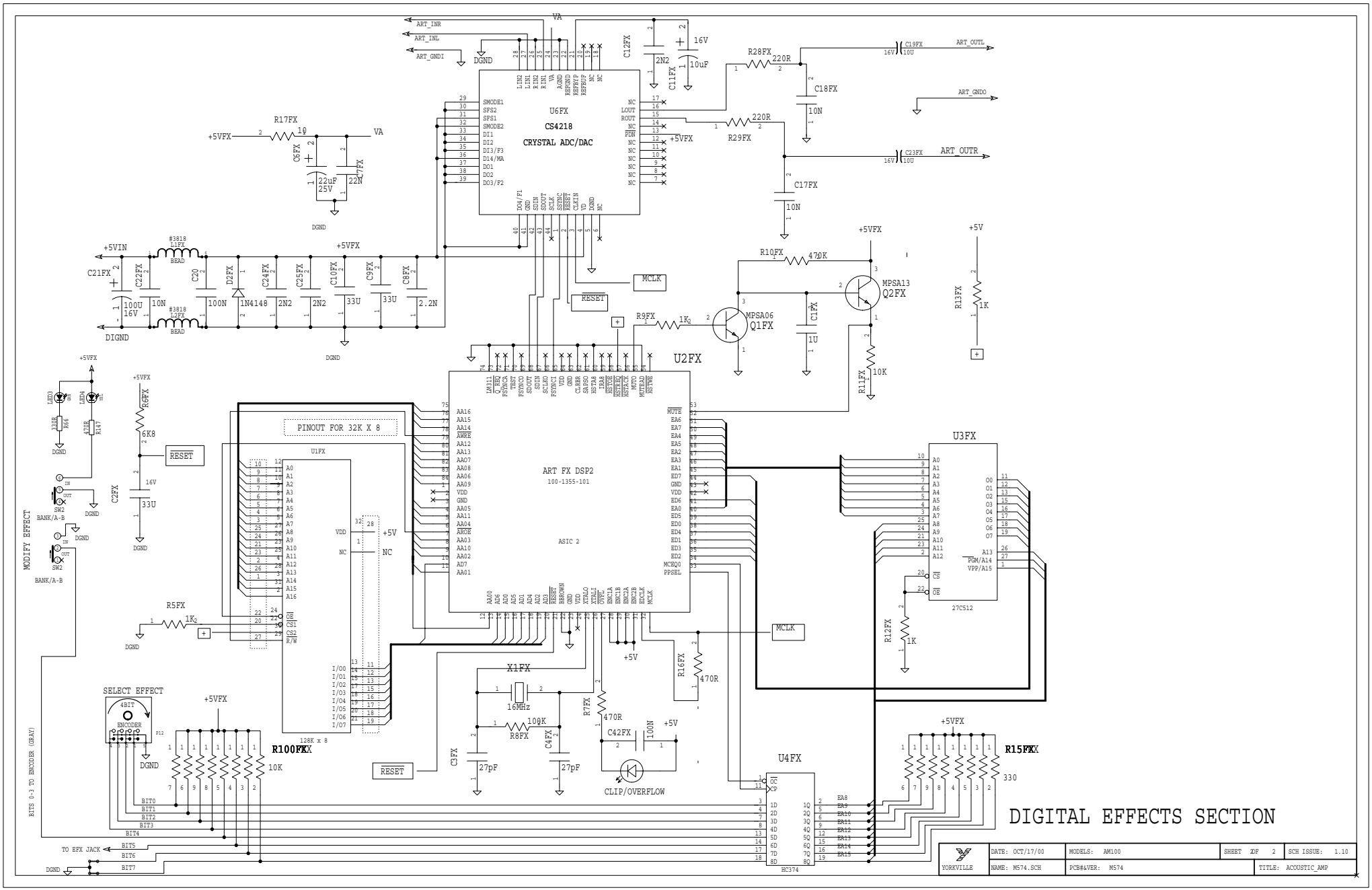
#	DATE	VER#	DESCRIPTION_OF_CHANGE
1	MAR/20/00	1.00	UPDATE_CE_AC-PWR_SUPPLY
2	MAY/08/00	1.10	UPDATE_FUSE_VALUES
3	MAY/24/00	1.20	C32_FOR_CE_E80n->100n
4	OCT/11/00	1.30	PC#6285_C27,C252_100N->10N
5	DEC/20/00	1.40	PC#6313_REVERSE_CONNECTION_TO_EFX ENABLE_FT-SW
6	.	.	.
7	OCT/24/01	1.50	CORRECT_C201-C202
8	D	V	N
9	D	V	N
10	D	V	N

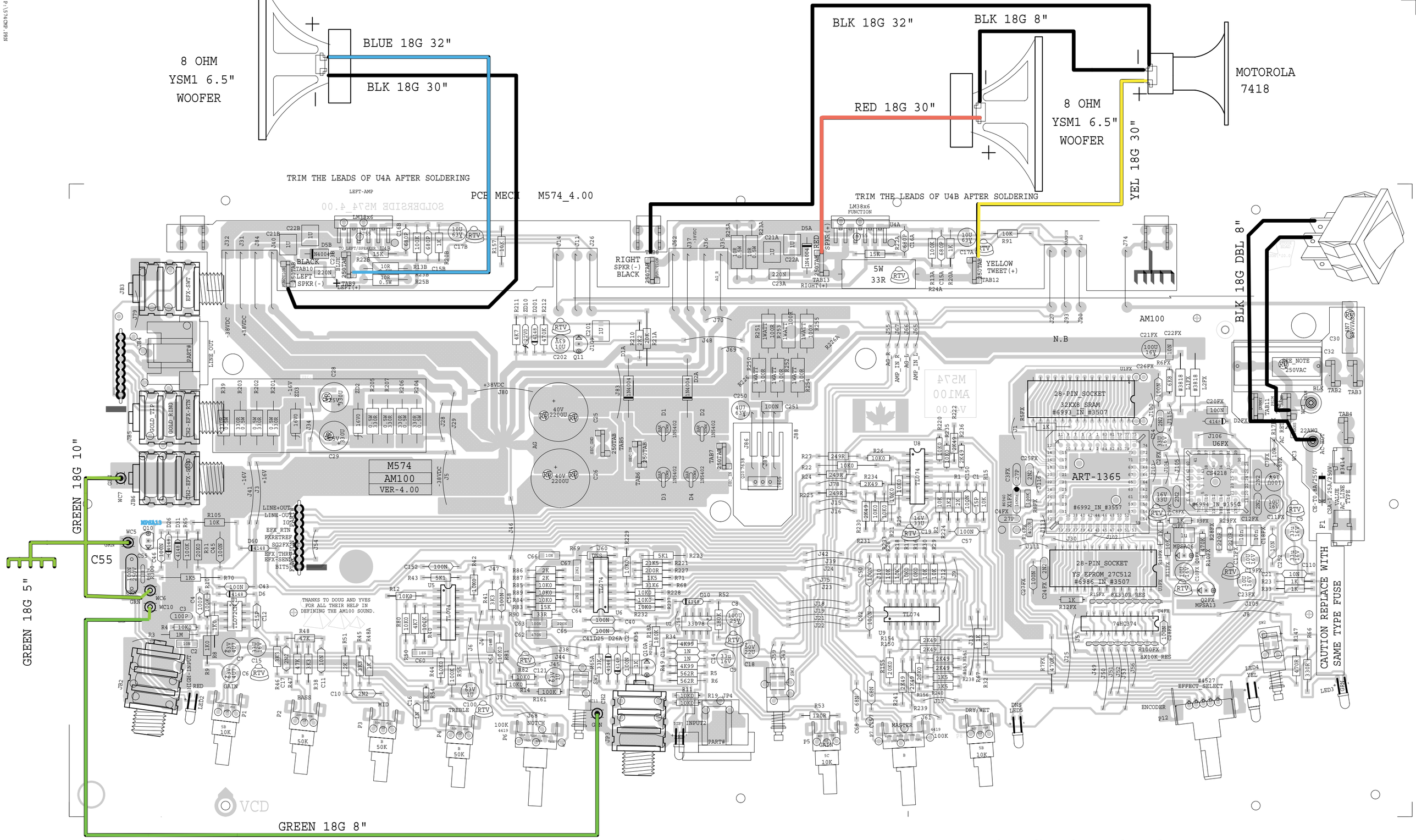
M574.PCB_POT_LIST

MODEL(S):- AM100

#	REF	FUNCTION	PART#	KNOB	AS OF
1	P1	GAIN	#4417	#8641	OCT/2000
2	P2	BASS	#4420	.	.
3	P3	MID	#4420	.	.
4	P4	TREBLE	#4420	.	.
5	P5	GAIN	#4418	.	.
6	P6	NOTCH	#4419	.	.
7	P7	MASTER	#4419	.	.
8	P8	DRY-WET	#4417	.	.
9	P12	EFFECT-SEL	#4527	.	.
10	.	.	.	.	.

YORKVILLE	DATE: OCT/24/2001	MODELS: AM100	SHEET 1OF 2	SCH ISSUE: 1.50
	NAME: M574.SCH	PCB#&VER: M574		TITLE: ACOUSTIC_AMP


DIGITAL EFFECTS SECTION
U6FX
CS4218
CRYSTAL ADC/DAC
U2FX
ART FX DSP2
100-1355-101
ASIC 2
U1FX
PINOUT FOR 32K X 8
128K x 8
U3FX
27C512
U4FX
HC374
X1FX
16MHz
MCLK
RESET
SELECT EFFECT
4BIT ENCODER
MODIFY EFFECT
BANK/A-B
CLIP/OVERFLOW
TO EFX JACK
BITS 0-3 TO ENCODER (GRAY)
ART_INR
ART_INL
ART_GNDI
ART_OUTL
ART_OUTR
ART_GNDO
+5VIN
DIGND
DGND
+5VFX
VA
+5V
MPSA13
Q2FX
MPSA06
Q1FX
YORKVILLE
DATE: OCT/17/00
MODELS: AM100
SHEET 2OF 2
SCH ISSUE: 1.10
NAME: M574.SCH
PCB#&VER: M574
TITLE: ACOUSTIC_AMP



M574.PCB_DATABASE_HISTORY

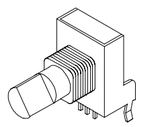
MODEL(S):- AM100

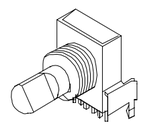
#	DATE	VER#	DESCRIPTION OF CHANGE
1	APR/17/00	1.00	FIRST PRODUCTION
2	MAY/11/00	1.10	PC#6252 NA-FUSE 1.6ASB->1.25ASB
3	OCT/11/00	1.20	PC#6285 C21,C25Z 100N->10N
4	OCT/17/00	.	PC#6292 R16FX 680R->470R DEL C5FX
5	DEC/20/00	2.00	PC#6313 REVERSE CONNECTION TO EFX
6	.	.	ENABLE FT SW ADD J79
7	JUN/25/01	2.00	FIXED SPAN ON R16,R17
8	NOV/13/01	2.10	ADD .05" TO BOARD EDGE @ P12
9	APR/17/02	3.00	UPDATE TABS FUSEHOLDER PADS
10	.	.	NO PARTS MOVED
11	JAN/15/03	4.00	PC#6584 YEL LED #6407->#5994
12	NOV/23/04	.	PC#6771 #3571->#3507 SKT FOR #6993 SRAM
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N
21	D	V	N
22	D	V	N
23	D	V	N
24	D	V	N
25	D	V	N
26	D	V	N
27	D	V	N
28	D	V	N
29	D	V	N
30	D	V	N
31	D	V	N
32	D	V	N
33	D	V	N
34	D	V	N
35	D	V	N
36	D	V	N
37	D	V	N
38	D	V	N
39	D	V	N
40	D	V	N
41	D	V	N
42	D	V	N
43	D	V	N
44	D	V	N
45	D	V	N
46	D	V	N
47	D	V	N
48	D	V	N
49	D	V	N
50	D	V	N

M574.PCB_POT_LIST

MODEL(S):- AM100

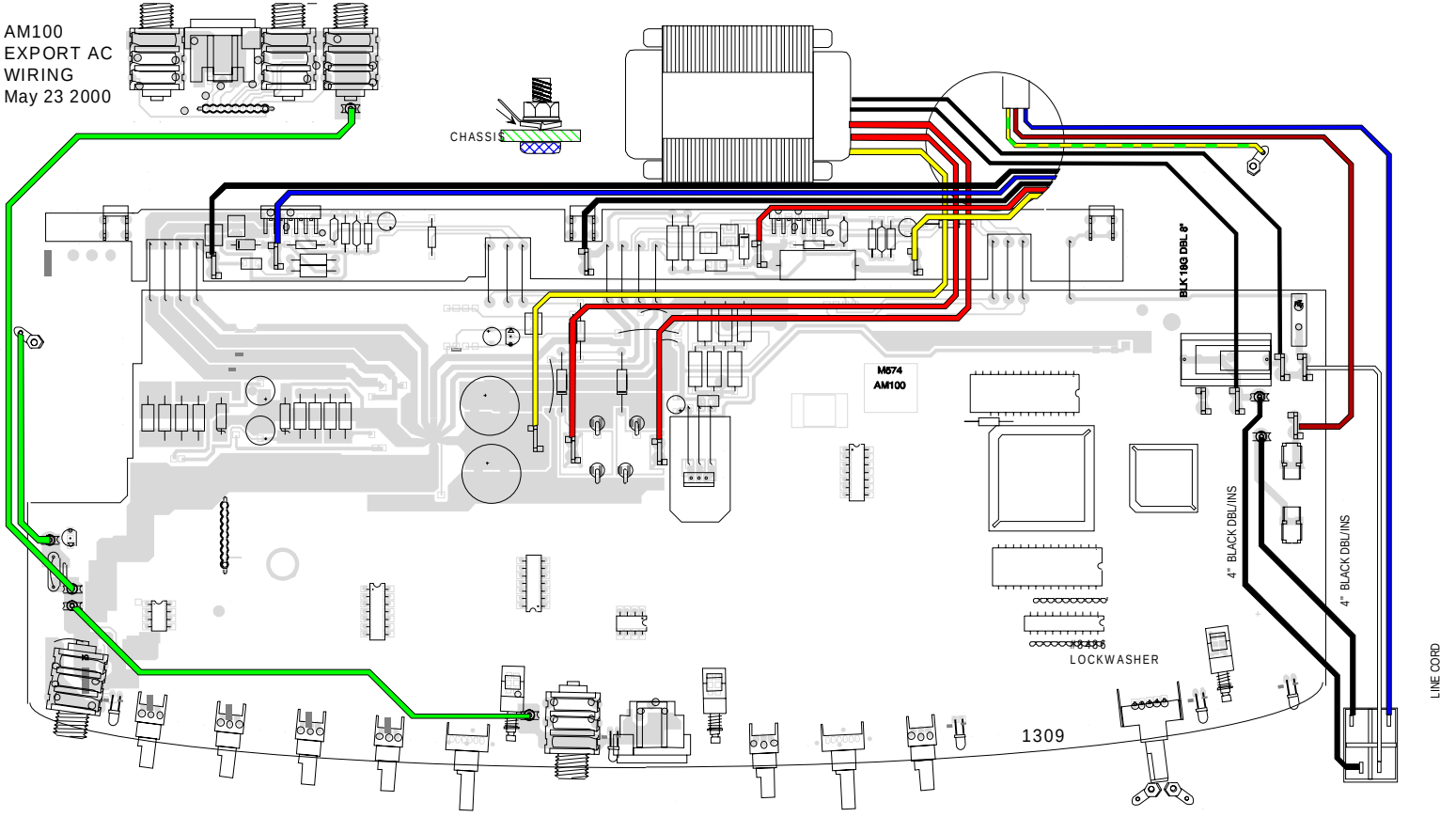
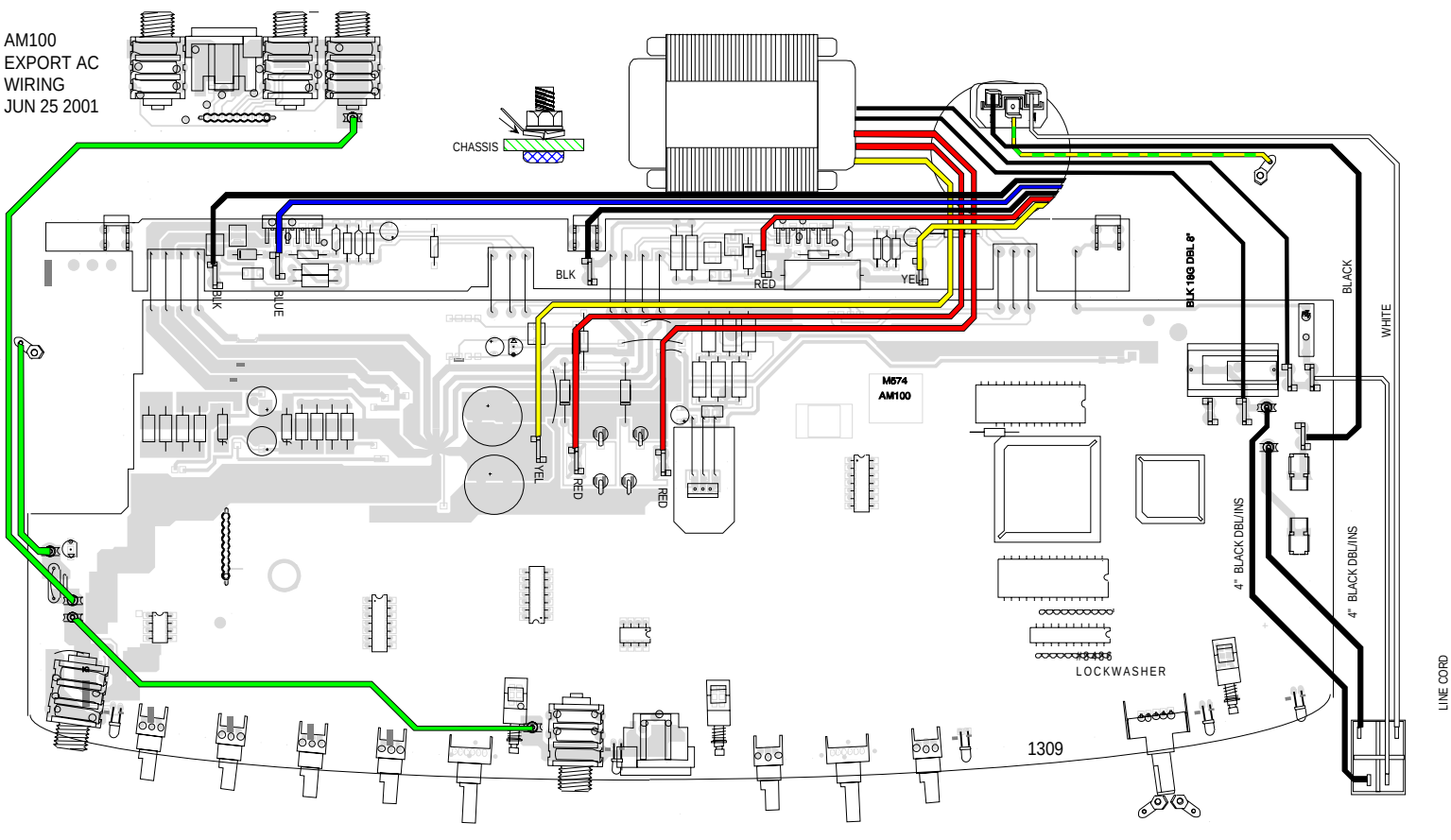
REF	FUNCTION	PART#	KNOB	AS_OF
P1	GAIN_CH1	4417	8641	MAR/2000
P5	GAIN_CH2	4418	8641	N
P2,P3,P4	BASS,MID,TREB	4420	8641	N
P6,P7	NOTCH,MASTER	4419	8641	N
P8	DRY/WET	4417	8641	N
P12	EFFECTS	4527	8641	N





PRODUCTION NOTES

1) RTV ALL 0.2" ELECTROLITIC CAPS.
   RTV CAPS TO SOCKET IN DIG. EFFECTS AREA
2) DO NOT STUFF LED5, R69
3) TRIM THE LEADS OF U4A AND U4B AFTER SOLDERING
4) FOR CE USE 100N 250V PT#5242 FOR C32 AC CAP
5) FOR NA USE 22N 275V PT#6435 FOR C32 AC CAP
6) DO NOT CUT THE LEADS OF D1,D2,D3,D4
   BEND OVER FLAT TO BOARD


AM100
EXPORT AC
WIRING
May 23 2000
CHASSIS
BLK 18G DBL 8"
M574
AM100
4" BLACK DBL/INS
4" BLACK DBL/INS
LINE CORD
#8435
LOCKWASHER
1309

AM100
EXPORT AC
WIRING
JUN 25 2001